

to latitude 28° N., longitude 131° E. On the latter date the depth of the center and the direction of movement of depression, as received radio by one of the reporting ships of the Weather Bureau were, respectively, at 6 a. m., 29.29 inches, NW.; at noon, 29.37 inches, NW.; at 6 p. m., 29.31 inches, N.W. It was doubtless this storm that affected shipping to the east of Japan on the 4th and 5th.

On August 4 the Japanese S. S. *Celebes Maru*, Capt. J. Kurimura, from Yokohama for San Francisco, began to feel the influence of this depression. Mr. J. Nakagawa, second officer and observer, states that at 3 p. m. the barometer was falling rapidly and the sky assuming a threatening appearance. The barometer continued to fall until 3.30 a. m. of the 5th, at which time there was a whole gale, with occasional squalls of hurricane force, and a very high sea. The vessel was laboring and plunging violently and shipping dangerous seas all the time. The lowest barometer occurred at 4 a. m. of the 5th, 29.09 inches, uncorrected. At that hour there was a SSE. gale, force 10. Position of ship, latitude 38° 50' N., longitude 148° 50' E. The shifts of the wind during the storm were ENE., E., SE., SSE., S.; highest force, 12, S.

Regarding the typhoon at the close of the month but little is known as yet. Press dispatches would indicate that it was of a severe character. At Manila several vessels in the harbor sustained damage and a number of lighters were wrecked. The following notes regarding these losses were taken from the *New York Maritime Register*:

Montrose (Br. S. S.)—London, September 2:

A typhoon occurred at Manila on August 31 and the following vessels in port received damage: Steamer *Montrose* (Br.) from New York via Shanghai, etc., had sternpost broken; steamer *Colusan* from Calcutta, etc., for San Francisco, broke her moorings—only a small portion of her cargo is damaged; steamer *Egremont Castle* (Br.) from New York via Hongkong, etc., was slightly damaged.

Eastern Mariner (S. S.)—Manila, September 2:

Steamer *Eastern Mariner*, from New York via Karatsu, etc., with oil, is aground in harbor here after encountering a typhoon; believed not badly damaged. A number of lighters were wrecked in the typhoon and the native crews are missing.

Aside from these storms of tropical origin in Asiatic waters the month was a quiet one. In a total of 134 reports that have been examined, representing 1,267 daily observations, gales were reported on but 26 days, as follows: Force 7 on 10 days; force 8 on 12 days; force 9 on 2 days; force 10 on 1 day; force 12 on 1 day. The

last-named gale was that experienced by the *Celebes Maru*, already referred to. Fog was encountered on 104 days, mainly in the form of occasional banks. Of the reports examined, 22 were from vessels on coastwise routes, principally between Panama and Pacific coast ports of the United States and Canada.

Pressure was generally below normal throughout the month on the Asiatic side and during the first half in Bering Sea and the Gulf of Alaska. In the latter waters an effect of this distribution was to cause persistent easterly winds. Mr. Perry Christiansen, observer on the American S. S. *Northwestern* (Seattle for Alaskan ports, Capt. Wm. Jensen), states that throughout the voyage lasting from July 30 to August 15 there were continuous strong SE. to NE. winds on Prince William Sound and across the Gulf of Alaska, with heavy rain. The wind at times almost reached the force of a gale. Lowest barometer reading, 29.28 inches, corrected.

Following the depression of the 4th and 5th east of Japan, to which reference has been made, a strong anticyclone moved southward over Kamchatka and spread slowly eastward. Central readings on the 5th and 6th reached 30.50 inches. By the 12th this high pressure was south of the Aleutians and beginning to affect the region of the permanent North Pacific anticyclone to the eastward, readings as high as 30.60 and 30.62 inches (normal central pressure, 30.30 inches) being reported on the 17th and 18th, respectively, to the northeastward of the Hawaiian Islands. Winds reaching gale force prevailed along the North American coast on these dates. The influence of this high pressure was more or less apparent until the close of the month. During the period from the 16th to the 20th another anticyclone developed over the western portion of the ocean and moved eastward, its center approximately following the fortieth parallel. This also had the effect of reinforcing the permanent anticyclone and readings above the normal for the month were reported on a number of days, as high as 30.56 inches on the 25th.

An incident of the fog conditions on the California coast, associated with this high pressure, was the grounding of the Dutch S. S. *Arakan*, near Point Reyes Light on August 31. An account of this grounding appears on page 466.

NOTES ON WEATHER IN OTHER PARTS OF THE WORLD.

Canada.—Regina, Saskatchewan, Aug. 5.—For the second time within a few days a cyclone [tornado] swept through the Estevan district. Several buildings were blown down and the temporary structures at the fair grounds were demolished.

No loss of life has been reported. Telephone wires for miles around were blown down and there was no direct communication with the district.—*Washington Star*, Aug. 5, 1920.

Alaska.—Dawson, Yukon, Aug. 10.—* * * Millions of feet of timber has been destroyed by forest fires which swept both banks of the Peel River for 160 miles. The season has been unusually dry and the river is so low that the steamer *Thistle* is stalled in Ross River.—*Washington Star*, Aug. 10, 1920.

Japan.—Tokio, Aug. 20.—Serious floods continue in northern and southern Japan. * * * In the Iwate prefecture 11 persons have been drowned and 4,600 houses submerged, 100 of them being destroyed. Fifty bridges also have gone down, and crops and roads have been ruined. * * *

The town of Thukumo, on the island of Shikoku, vir-

tually has been destroyed. Seventy bodies have been recovered in the muddy streets there. * * *

There has been considerable damage at Osaka. * * * —*Washington Star*, Aug. 21, 1920.

Philippine Islands.—Manila, Aug. 17.—Collapse of a mountain top on this island, in a recent storm, buried an entire Igorotte village under hundreds of feet of earth, blotting out the lives of 70 natives. * * * —*Washington Star*, Aug. 20, 1920.

India.—London, Aug. 11.—Simla reports that abnormal monsoonal winds have caused floods throughout the country. A number of villages in Bengal were swept away, and large areas of country in various districts destroyed. In Calcutta many streets were deeply flooded and heavy damage done to goods and property.—*The Samoa Times*, Apia, Samoa, Aug. 14, 1920.

Chile.—Santiago, Aug. 13.—The first snowstorm here in more than a decade occurred yesterday, about 6 inches falling. In the mountains the storm assumed blizzard proportions, interrupting communications between the coast and the cities of the central provinces.—*Washington Post*, Aug. 14, 1920.